Serial No.: 10/583,612 PU030327

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Patent Application

Inventors	:	**Mark Alan Schultz et al.**
Serial No.	:	**10/583,612**
Filed	:	**June 20, 2006**
Title	:	**LIGHT MASKING FOR A SEGMENTED DISPLAY SYSTEM**
Examiner	:	**Rochelle Ann J. Blackman**
Art Unit	:	**2862**

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Patricia A. Verlangieri

APPELLANTS' BRIEF UNDER C. F. R. § 1.192

On January 9, 2009, Appellants' filed a timely Notice of Appeal (that was received in the United States Patent and Trademark Office on January 9, 2009) from the action of the Examiner finally rejecting pending claims 1-7. The Appellants' herein file this Brief in accordance with 35 C. F. R. § 1.192.

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1. IDENTIFICATION OF THE REAL PARTY IN INTEREST

The real party in interest for the above-identified application is Thomson Licensing, which is the assignee of record for this application.

2. IDENTIFICATION OF RELATED APPEALS OR INTERFERENCES

To the best of Appellants' knowledge, there are no appeals or interferences that will be directly affected by, or will have a bearing on the decision of this appeal.

3. STATUS OF THE CLAIMS

Claims 1-7 are rejected and the rejection of claims 1-7 is appealed.

The above-identified application was filed on June 20, 2006, which claims priority under 35 U. S. C. § 365 to International Application No. PCT/US2004/043690 filed December 22, 2004 which claims benefit of United States Provisional Application No. 60/531,732 filed December 22, 2003. Claims 1-7 were pending.

A first Office Action was mailed March 29, 2007 (Paper No. **20070323**), in which claims 1-7 were rejected.

In Appellant's response to the first Office Action, dated August 29, 2007, claims 1 and 3 were amended.

The Examiner in a second Office Action, mailed November 28, 2007 (Paper No. **20071114**), rejected claims 1-7.

Appellant's filed a response to the second Office Action on March 28, 2008. No claims were amended in this response.

The Examiner in a third Office Action mailed July 10, 2008 (Paper No. **20080706**), finally rejected claims 1-7.

The status of the claims is as follows:

Claims 1 and 3 are once amended.

Claims 1-7 all stand finally rejected.

4. STATUS OF THE AMENDMENTS

All amendments were entered.

5. SUMMARY OF THE CLAIMED SUBJECT MATTER

Independent claim 1 is directed to a projection system. See Appellant's specification at page 1, lines 9-10. The projection system 100 has a plurality of displays 111A, 111B, 111C, 111D arranged adjacent to each other to form a screen, a plurality of projectors 110A, 110B, 110C, 110D, one corresponding to each display of the plurality of displays, wherein each projector includes a lens 130. See Appellant's specification at FIGS. 3-4 and page 2, lines 20-23. A mask assembly 140 is disposed between and surrounding each lens 130 of the plurality of projectors and the corresponding plurality of displays. See Appellant's specification at FIGS. 4-5B and page 2, line 24-28 and page 3, lines 1-6.

Claim 3 is directed to a projection system. See Appellant's specification at page 1, lines 9-10. The projection system 100 has a plurality of displays 111A, 111B, 111C, 111D arranged adjacent to each other to form a screen, a plurality of projectors 110A, 110B, 110C, 110D, one corresponding to each display of the plurality of displays, wherein each projector includes a lens 130 and a mirror 125. See Appellant's specification at FIGS. 3-4 and page 2, lines 20-23. A mask assembly 140 is disposed between and surrounding each lens 130 of the plurality of projectors and the corresponding plurality of displays. See Appellant's specification at FIGS. 4-5B and page 2, line 24-28 and page 3, lines 1-6.

6. GROUNDS FOR REJECTION TO BE REVIEWED ON APPEAL

1. The Examiner has rejected claims 1-2 and 5-7 as being obvious under 35 U. S. C. § 103(a) over Safran et al. (U. S. Patent Application 2003/0058416) in view of Keelan et al. (U.S. Patent 5,537,166).

2. The Examiner has rejected claims 3-4 as being obvious under 35 U. S. C. § 103(a) over Safran et al. (U. S. Patent Application 2003/0058416) in view of Keelan et al. (U.S. Patent 5,537,166) and further in view of Yamanaka (U. S. Patent 6,637,887).

7. ARGUMENT

1. Rejection of claims 1-2 and 5-7 under 35 U. S. C. § 103(a) over Safran et al. (U. S. Patent Application 2003/0058416) in view of Keelan et al. (U.S. Patent 5,537,166).

Claims 1-2 and 5-7

Safran et al. describes a multi projector system. See Safran et al. at page 1, paragraph 0001. In Safran et al., output from a plurality of projectors 20 is projected onto a plurality of corresponding screens 30. See Safran et al. at FIG. 1A and page 3, paragraph 0029.

Independent claim 1 is directed to a projection system. See Appellant's specification at page 1, lines 9-10. The projection system 100 has a plurality of displays 111A, 111B, 111C, 111D arranged adjacent to each other to form a screen, a plurality of projectors 110A, 110B, 110C, 110D, one corresponding to each display of the plurality of displays, wherein each projector includes a lens 130. See Appellant's specification at FIGS. 3-4 and page 2, lines 20-23. A mask

assembly 140 is disposed between and surrounding each lens 130 of the plurality of projectors and the corresponding plurality of displays. See Appellant's specification at FIGS. 4-5B and page 2, line 24-28 and page 3, lines 1-6.

Contrary to Appellant's claim 1, Safran et al. does not disclose a mask assembly disposed between and surrounding each lens of the plurality of projectors and the corresponding plurality of displays in order to block extraneous light from adjacent displays.

Keelan et al. describes an external aperture on a lens of a slide projector. See Keelan et al. at FIG. column 1, lines 5-7. The size 12 of the external aperture 10 on the lens controls center to edge sharpness uniformity of an individually projected image. See Keelan et al. at FIG. 1 and column 2, lines 36-47.

Keelan et al. does not describe or suggest a projection system including a plurality of displays arranged adjacent to each other to form a screen, a plurality of projectors, one corresponding to each display of the plurality of displays, wherein each projector includes a lens, and a mask assembly disposed between and surrounding each lens of the plurality of projectors and the corresponding plurality of displays in order to block extraneous light from adjacent projectors. Rather, Keelan et al. is not applicable to a multi-projector system since this reference only teaches an external aperture on a lens of a slide projector in which the size of the external aperture on the lens controls center to edge sharpness uniformity of an individually projected image. The aperture of Keelan et al. does not surround each lens so as to block extraneous light from adjacent projectors because there is no need to when there is only an individually projected image.

Furthermore, the combination of the teachings of Safran at al. and Keelan et al. do not result in the solution of claim 1. If the multi-projector system of Safran et al. is combined with the lens aperture of Keelan et al., the resulting arrangement still does not surround each lens so as to block extraneous light from adjacent projectors. Therefore, the combination of Chen et al. with Keelan et al. cannot and does not result in the solution of claim 1. Thus, claim 1 is

patentable over the combination of these references. Since claims 2 and 5-7 depend directly, or indirectly, from claim 1, these claims are also patentable over this combination for the same reasons.

All claims argued within this section will stand or fall together.

2. Rejection of claims 1-2 and 5-7 under 35 U. S. C. § 103(a) over Safran et al. (U. S. Patent Application 2003/0058416) in view of Keelan et al. (U.S. Patent 5,537,166) and further in view of Yamanaka (U. S. Patent 6,637,887).

Claims 3-4

Safran et al. describes a multi projector system. See Safran et al. at page 1, paragraph 0001. In Safran et al., output from a plurality of projectors 20 is projected onto a plurality of corresponding screens 30. See Safran et al. at FIG. 1A and page 3, paragraph 0029.

Claim 3 is directed to a projection system. See Appellant's specification at page 1, lines 9-10. The projection system 100 has a plurality of displays 111A, 111B, 111C, 111D arranged adjacent to each other to form a screen, a plurality of projectors 110A, 110B, 110C, 110D, one corresponding to each display of the plurality of displays, wherein each projector includes a lens 130 and a mirror 125. See Appellant's specification at FIGS. 3-4 and page 2, lines 20-23. A mask assembly 140 is disposed between and surrounding each lens 130 of the plurality of projectors and the corresponding plurality of displays. See Appellant's specification at FIGS. 4-5B and page 2, line 24-28 and page 3, lines 1-6.

Contrary to Appellant's claim 3, Safran et al. does not disclose a mask assembly disposed between and surrounding each lens of the plurality of projectors and the corresponding plurality of displays in order to block extraneous light from adjacent displays.

Keelan et al. describes an external aperture on a lens of a slide projector. See Keelan et al. at FIG. column 1, lines 5-7. The size 12 of the external aperture 10 on the lens controls center to edge sharpness uniformity of an individually projected image. See Keelan et al. at FIG. 1 and column 2, lines 36-47.

Keelan et al. does not describe or suggest a projection system including a plurality of displays arranged adjacent to each other to form a screen, a plurality of projectors, one corresponding to each display of the plurality of displays, wherein each projector includes a lens, and a mask assembly disposed between and surrounding each lens of the plurality of projectors and the corresponding plurality of displays in order to block extraneous light from adjacent projectors. Rather, Keelan et al. is not applicable to a multi-projector system since this reference only teaches an external aperture on a lens of a slide projector in which the size of the external aperture on the lens controls center to edge sharpness uniformity of an individually projected image. The aperture of Keelan et al. does not surround each lens so as to block extraneous light from adjacent projectors because there is no need to when there is only an individually projected image.

Yamanaka describes a multi projector device. See Yamanaka at column 1, lines 8-11. In Yamanaka, output from a plurality of projectors 1 is combined onto a single screen 3. See Yamanaka at FIGS. 2 and 14 and column 8, lines 15-21. Sheet interceptors 5 are positioned to intercept only portions of the light paths output from the plurality of projectors 1. See Yamanaka at FIG. 2 and column 8, lines 23-30.

Yamanaka does not describe or suggest a projection system including a plurality of displays arranged adjacent to each other to form a screen, a plurality of projectors, one corresponding to each display of the plurality of displays, wherein each projector includes a lens, and a mask assembly disposed between and surrounding each lens of the plurality of projectors and the corresponding plurality of displays in order to block extraneous light from adjacent projectors. Rather, Yamanaka only teaches sheet interceptors positioned to intercept only

portions of the light paths output from a plurality of projectors onto a single screen. The sheet interceptors of Yamanaka do not surround each lens so as to block extraneous light from adjacent projectors.

Furthermore, the combination of the teachings of Safran at al., Keelan et al. and Yamanaka do not result in the solution of claim 3. If the multi-projector system of Safran et al. is combined with the lens aperture of Keelan et al. and sheet interceptors of Yamanaka, the resulting arrangement still does not surround each lens so as to block extraneous light from adjacent projectors. Therefore, the combination of Chen et al. with Keelan et al. and Yamanaka cannot and does not result in the solution of claim 3. Thus, claim 3 is patentable over the combination of these references. Since claim 4 depends directly from claim 3, this claim is also patentable over this combination for the same reasons.

All claims argued within this section will stand or fall together.

8. CONCLUSION

In view of the foregoing arguments, appellants respectfully request that

the Examiners' rejection of claims 1-7 be reversed. Favorable action is respectfully requested.

Respectfully submitted,

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April 8, 2009

Attachments
Appendix I - Claims 1-7
Appendix II - Evidence
Appendix III - Related Appeals or Interferences

APPENDIX I - APPEALED CLAIMS

1. A projection system, comprising:

a plurality of displays arranged adjacent to each other to form a screen;

a plurality of projectors, one corresponding to each display of the plurality of displays, wherein each projector includes a lens;

a mask assembly disposed between and surrounding each lens of the plurality of projectors and the corresponding plurality of displays.

2. The projection system of claim 1 wherein the plurality of displays are arranged in an N x 1 array.

3. The projection system of claim 1 wherein each of the plurality of projectors further includes a mirror.

4. The projection system of claim 3 wherein the mirror is aligned at an angle of about 45 degrees with respect to a lamp of the projector.

5. The projection system of claim 1 wherein the mask assembly includes a mask frame and a mask.

6. The projection system of claim 5 wherein the mask is moveable relative to the mask frame.

7. The projection system of claim 5 wherein the mask is disposed on the lens.

APPENDIX II - EVIDENCE

Not applicable.

APPENDIX III - RELATED APPEALS OR INTERFERENCES

Not applicable.